

FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS



First Aero Weekly in the World

Founder and Editor: STANLEY SPOONER

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DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:—

1926	
May 19	Inst. Ae.E. visit to the National Physical Laboratory, Teddington.
May 30	Gordon-Bennett Balloon Race, Antwerp.
June 11	Independent Force (R.A.F.) Dinner Club Annual Re-union Dinner, Connaught Rooms, Great Queen Street, Kingsway.
June 11-13	Belgian Light 'Plane and Touring Aeroplane Competition.
June 12	Inst. Ae.E. visit to Croydon Aerodrome.
July 8-24	Royal Tournament, Olympia
July 9-10	King's Cup Race, Hendon.
July 11-27....	German Seaplane Competition at Warnemunde.
Aug. 9-15	French Light 'Plane Competition.
Sept. 10-17	Two-Seater Light Aeroplane Competition, Lympne.
Sept. 18	Grosvenor Challenge Cup, at Lympne.
Oct.	Schneider Cup Race at Norfolk, Virginia, U.S.A.
Nov.-Dec.	Paris Aero Show.

EDITORIAL COMMENT.



A Red-Letter Day

TUESDAY, May 4, 1926, is likely to be regarded as a red-letter day in more ways than one. On that day commenced the general strike which has now for more than a week caused inconvenience, to put it very mildly, to millions of people in the British Isles, and which, at the moment of writing, does not show any signs of coming to an end. As far as British aviation is concerned, the date is significant because on that date, for the first time in history, His Royal Highness the Prince of Wales returned from Paris to London by air, thus putting the hall mark, as it were, on civil aviation as a recognised and safe means of transport. This is not, of course, the first time His Royal Highness has flown. In fact, during the war, it is known that the Prince of Wales did quite a considerable amount of flying, but it is the first time he has returned from abroad by air. In view of the fact that, had he so chosen, His Royal Highness might easily have been conveyed home by some special vessel of the Royal Navy, but that he chose the quicker and very much simpler way of returning by air, direct to the London Terminal Aerodrome at Croydon, shows that he is fully alive to the position of air transport at the present time, a fact which has been known for a long time, but of which the flight on May 4 was the outward and visible proof. Imperial Airways are to be congratulated upon having received such distinguished official recognition, as are also the makers of the aeroplane, Handley Page, Ltd., and of the engines, D. Napier and Son, Ltd. The pilot who had the honour of bringing His Royal Highness home was Capt. O. P. Jones, and it is worthy of note that during the greater part of the trip the Prince of Wales sat in the pilot's cockpit, alongside the pilot, to whom, at the end of the flight, he expressed his satisfaction with the trip.

Among the members of his staff who accompanied His Royal Highness on the flight were General Trotter, his Private Secretary, and Wing Commander Smyth-Pigott, D.S.O., British Air Attaché in Paris.

Vindication of the Light 'Plane

In this issue of FLIGHT we publish a brief account of a flight made during February and March of this year across the Alps on a two-seater light 'plane fitted with an engine of 19 h.p. only. It does not require a great deal of imagination to picture what this must have meant to Herr Guritzer and Dr. Ing. von Langsdorff, the two German aviators who undertook the feat in order "to demonstrate that the light 'plane is not a 'fair-weather' machine." During the greater portion of the flight an engine failure would doubtless have resulted in very grave risk, as the chance to make a safe forced landing in the valleys among the Alps must have been almost infinitesimal. That the task succeeded must, of course, in the first place be ascribed to the reliability of the little two-cylinder Daimler-Mercedes engine, whose 885 c.c. capacity must have been repeatedly taxed to the utmost. Although the flight may be described as somewhat foolhardy, it has undoubtedly served to demonstrate that in the hands of a determined pilot, there are few things which a machine with this small power cannot do. Fogs, rain, clouds and snow were the order of the day during most of the trip, and when it is remembered that throughout the flight across the Alps the machine must have been flying at or very close to its "ceiling," the task accomplished stands out in its true perspective. Normally, of course, a light 'plane would never be called upon for such arduous work, but the fact that the Daimler L.20 came through the flight without a hitch, demonstrates that for the kind of flying for which a low-power light 'plane should legitimately be used, there is sufficient power reserve to ensure good reliability.

The 1,500 miles' flight has served to prove several things. To begin with, landings had to be made in the most unlikely places, and in no instance was any difficulty experienced in coming down safely. The only damage during the whole flight was a tear in the fabric of one wing, caused by a stump of a post sticking up through the snow. Dr. von Langsdorff states that no trouble was discovered, due to the way in which an efficient light 'plane "floats" along before alighting, and landings were made in many cases in fields which would have been utterly impossible for large machines.

Getting off is generally believed to be a more serious problem with a low-powered machine, but again no real difficulty seems to have been experienced. On one occasion a track had to be cleared across a small meadow, and to get a sufficient run for the take-off this track had to be placed at right angles to the wind. In spite of this, however, the machine got away well at the second attempt. The low cruising speed of low-powered aeroplanes is another argument advanced against the type. During the flight over the Alps a head wind was encountered nearly the whole way, and yet the machine got through. Really it would seem that the flight can be regarded as a vindication of the light 'plane, and the question naturally arises whether it may not be

worth while to go back to really low-powered machines, for single-seaters at any rate.

* * *

The Pole Reached

Whether or not one holds the opinion that there is any particular useful purpose served by reaching the North Pole by air—or by any other means—it is impossible to withhold a great amount of admiration for any plucky attempt made to penetrate to the point on the earth's surface farthest removed from the Equator, and the aviation world at any rate will congratulate Lieutenant-Commander Richard Byrd on having, as reported, successfully attained the goal of his ambition and returned safely to his base at Spitzbergen after having been in the air for 15½ hours. It may, perhaps, be doubted by sticklers for strict accuracy whether any means exist for ascertaining whether or not the exact point of the North Pole has been reached, and that the best that can be hoped for is a definite assurance that Commander Byrd has been within a few miles of the Pole. Frankly, we do not think this matters a great deal. Peary has already determined the exact spot, and from an aviation point of view all that need be taken into consideration is that an aeroplane has proved itself capable of reaching such great latitudes and returning from them safely. Whether or not during its flight the machine crossed the actual spot really does not interest us very much.

As far as can be gathered at the moment, the machine used by Commander Byrd was the three-engined Fokker monoplane fitted with three (American) Wright "Whirlwind" engines of the radial air-cooled type. In this connection it is of interest to recall that a similar machine has just been delivered by the Fokker works to the British Air Ministry, the machine, piloted by Mijneer Grase, the Fokker chief test pilot, and carrying as passenger Mijneer Stephan, General Manager of the Fokker Amsterdam Works, arriving at Martlesham on April 30. On arrival the Fokker is stated to have been put through a series of evolutions, including a loop, which is probably the first time in history that a three-engined aeroplane has performed this feat.

Commander Byrd's flight to the north pole and back is a triumph not only for aviation in general and for the firms and individuals directly concerned in particular, but seems also to be a triumph for the three-engined type of aeroplane. It is now several years since the view was advanced that, from theoretical considerations, the three-engined aeroplane, with sufficient power to fly on two of its engines only, should give practical immunity from forced landings, and this type is now about to be adopted by a number of airlines, foreign as well as British. It seems justifiable to take Commander Byrd's flight as a proof of the reliability of this type of machine, and to see in it full justification for the claims made for the "trimotor" aeroplane.

NOTICE.

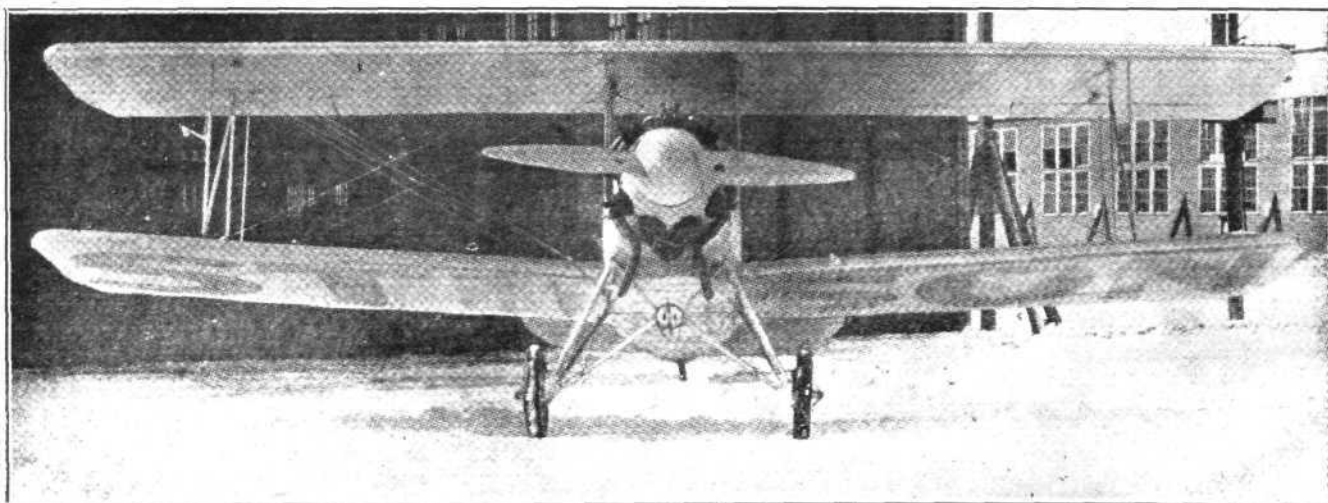
Owing to the General Strike, delay in the printing of "Flight" each week necessarily follows. Each issue weekly will, however, be completed, thus forming an unbroken weekly aeronautical record, and each issue will be distributed as speedily as the unprecedented circumstances will permit.—The Publishers.

THE STINSON-DETROITER

An American Commercial Cabin 'Plane

ONE of America's pioneer air pilots, Edie Stinson, has recently produced a rather interesting commercial aeroplane which, besides possessing several novel features, also has a very good performance. This machine is a tractor fuselage biplane intended for commercial work, and is provided with an extremely comfortable totally-enclosed cabin accommodating four persons, including the pilot. Among the unusual features of this machine may be mentioned the fitting of brakes on the wheels for bringing the machine

The Stinson-Detroit has been designed and constructed to conform to the latest provisions of the American Aeronautical Safety Code. It is constructed of welded steel tubing throughout, with the exception of the wing spars, which are of heavy spruce, and is in fact, practically speaking, an all-metal job. The ribs are built up of duralumin. The wings are of comparatively thick section (U.S.A. 35 B), and are of equal span and chord with single bay bracing. The whole structure is fabric covered, thus greatly reducing



THE "STINSON-DETROITER": Front view showing the 200-h.p. Wright "Whirlwind" engine and the split-axle type landing gear which is provided with brakes on the wheels.

quickly to rest, and an electric self-starter ("Bijur") for the engine.

The development of this machine is the result of many years of flying experience on the part of its designer, for Edie Stinson's flying experience extends over fifteen years, during which time he has spent over 11,000 hours in the air. In designing the Stinson-Detroit three main points were kept in mind. First to produce a machine which would be as safe as possible, secondly, it was to possess the maximum of comfort for pilot and passengers, and last but not least the

the cost of construction. Ailerons are fitted to both top and bottom planes.

The fuselage is of rectangular cross-section, enlarged in the neighbourhood of the wings to form the cabin. The latter is provided with large windows in the sides and in front—the fuselage immediately in front of the cabin being of reduced depth—so that a really excellent range of vision is provided. When landing, it is possible for the pilot to look directly over the leading edge of the lower plane, while the wheels of the undercarriage are also visible. Access to



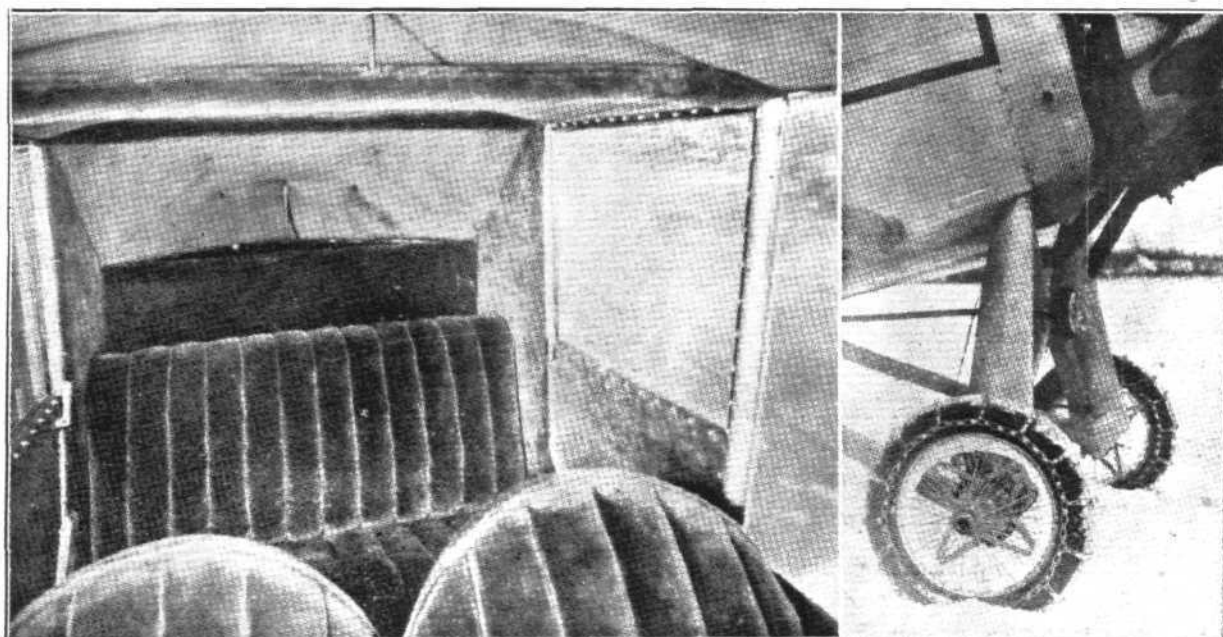
THE "STINSON-DETROITER": A new American commercial cabin machine designed by Edie Stinson, a well-known American pilot. It is a four-seater and is fitted with brakes on the landing wheels.

design was to be such as to lend itself to production requirements.

For the owner-pilot this machine is admirably fitted, with its electric starter, and luxuriously-upholstered and heated cabin complete with carpet and cigar-lighter. Test flights have shown that the machine is very easy to fly, and has ample control—it having been flown for long periods with hands and feet off the controls.

the cabin is by way of a door on the left-hand side of the cabin.

At the rear of the cabin is a seat, facing forward, for two passengers, and in front are two seats side by side for pilot and a third passenger. Dual control is provided, the ailerons being actuated by the rotation of wheels mounted on the dash, while the elevators are operated by pushing the wheel forward or backward, through the dash. The rudder is operated by



THE "STINSON-DETROITER" : Two views showing, on the left, the interior of the comfortable cabin and, on the right, the landing gear, the wheels of which are fitted with brakes and non-skid chains.

a foot-bar, on which is also mounted pedals for actuating the brakes.

Each landing wheel is provided with a brake, and the brakes can either be operated independently or simultaneously: it is possible to operate the rudder and the brakes together, the one assisting the other and rendering ground manoeuvring very easy. An unusual feature of this brake gear is the provision of anti-skid chains on the landing wheels, which have been found to be very effective (if not necessary) when the ground is covered with snow. The employment of wheel brakes not only enables the machine to be pulled up within a 100-ft. run, but when commencing a flight they serve to check the machine from bounding forward when the engine is started up or is being given its preliminary warm up—thus dispensing with the necessity for chock-blocks. When operating the machine single-handed this is an obvious advantage.

A large balanced rudder is provided, the vertical fin being adjusted to counteract the slipstream effect from the airscrew. The horizontal tail plane is adjustable as to incidence by means of a lever on the left-hand side of the pilot's seat.

The landing gear—which is located well forward in order to prevent the machine from turning over when the brakes are applied—is of the split axle type, and is of strong construction.

A 200 h.p. Wright "Whirlwind" radial air-cooled engine is employed, carefully streamlined into the fuselage by cowling. The exhaust is carried below the fuselage so that there is very little noise inside the cabin, where conversation between the occupants may be carried on without difficulty. A Curtiss-Reed metal airscrew is fitted.

If required the Stinson-Detroiter may be used for mail or freight carrying, there being space available for a 300 lbs. load in addition to the three passengers. This machine was built by the Stinson Airplane Syndicate of Detroit (Mich.), and the Syndicate is now being turned into a company for producing the machine in quantity.

The main characteristics of the Stinson-Detroiter are:—

Span	33 ft. 9 ins.
Chord	6 ft. 0 ins.
O.A. length	28 ft. 0 ins.
Wing area	350 sq. ft.
Dihedral angle (bottom)	4°
Angle of incidence	0°
Weight empty	1,700 lbs.
Useful load	1,200 lbs.
Speed range	45-125 m.p.h.
Petrol capacity	76 gallons.
Oil capacity	7½ gallons.
Cruising range	500 miles.

THE POLAR FLIGHTS

Lieut.-Commander Byrd Reaches North Pole

At 2 a.m. on May 9, Lieut.-Commander R. E. Byrd, leader of one of three American Air Expeditions to the North Pole, left King's Bay, Spitzbergen, on his dash to the Pole, some 700 miles or so distant. It is reported that Commander Byrd succeeded in reaching and flying over the Pole, and he returned safely back to his base at Spitzbergen at 4.20 p.m., having made a flight lasting nearly 15½ hours.

Commander Byrd was flying a Fokker F VII, fitted with three 200 h.p. Wright "Whirlwind" engines. This machine has been provided with two 100-gal. petrol tanks mounted in the centre of the wings, and two additional storage tanks, each containing 110 gals., located in the fuselage. This should give the machine a cruising radius of about 1,500 miles. The pilot's seat has been entirely enclosed and dual control has been installed. At the rear of the pilot's cockpit is a compartment for the wireless equipment.

Behind this, on either side of the fuselage with a narrow gangway between are the additional fuel tanks and space for storing provisions. At the rear of the cabin is a raised observation platform with a manhole in the top of the fuselage, from which the observer may take his sights, photographs, etc. The machine has been fitted with skis in place of the landing wheels.

Among the 46 members of this expedition are the following: Floyd O. Bennett (second in command and pilot), Lieut. G. O. Noville, U.S.N. Reserve (third in command and flight engineer)

Lieut. R. C. Oertel, U.S.A. Reserve (fourth in command and pilot); 1st Lieut. A. N. Parker U.S. Marine Corps (pilot); W. C. Haynes (meteorologist); T. H. Kincaid (engine expert); and Naval Air Service Mechanic Peterson.

The main objects of the expedition are: To prove that air navigation in the Arctic is feasible and that freight and passenger travel over the top of the world is certain to come; to search for new land in the unexplored areas of the Arctic; to conquer the North Pole from the air; as a sporting adventure; and as a demonstration of what an aeroplane can do.

On hearing the news of Commander Byrd's flight, President Coolidge expressed his heartiest congratulations to those concerned. One of the first to offer congratulations to Commander Byrd on his return to Spitzbergen was Capt. Amundsen who was also at King's Bay in readiness for his flight to the Pole in the airship "Norge."

The Amundsen Expedition

On May 11, at 10.10 a.m., two days after Commander Byrd's dash north, Capt. Roald Amundsen and his crew departed from King's Bay in the Italian semi-rigid airship "Norge," amid scenes of great enthusiasm and to the strains of the Norwegian National Anthem. The "Norge," had started on the flight from Russia to Spitzbergen last week, arriving at King's Bay on May 7.

THE VINDICATION OF THE LIGHT 'PLANE

A German Two-Seater Crosses the Alps in Mid-Winter

WHAT is surely one of the most remarkable performances of its kind in the history of aviation came to a successful conclusion on March 16 last, when two German aviators returned to their starting point at Sindelfingen, after having covered a distance of approximately 1,500 miles, including flights over some of the highest points in the Tauern mountains. The flight was undertaken in order to demonstrate that the light aeroplane is not a "fair-weather" machine, but is capable of rendering useful service under conditions which would be extremely trying to high-powered aeroplanes. The aviators

"dumps" anywhere along the route. Use was, of course, made of existing aerodrome and refuelling facilities where possible, but in the main the two venturesome aviators relied upon their own resources in finding landing fields sufficiently close to towns to enable petrol supplies to be brought out to them. Engine spares other than such few as were carried on board the machine, were not provided for, and it says something for the 19-h.p. Mercedes engine that no serious trouble was experienced in spite of the heavy power loading.

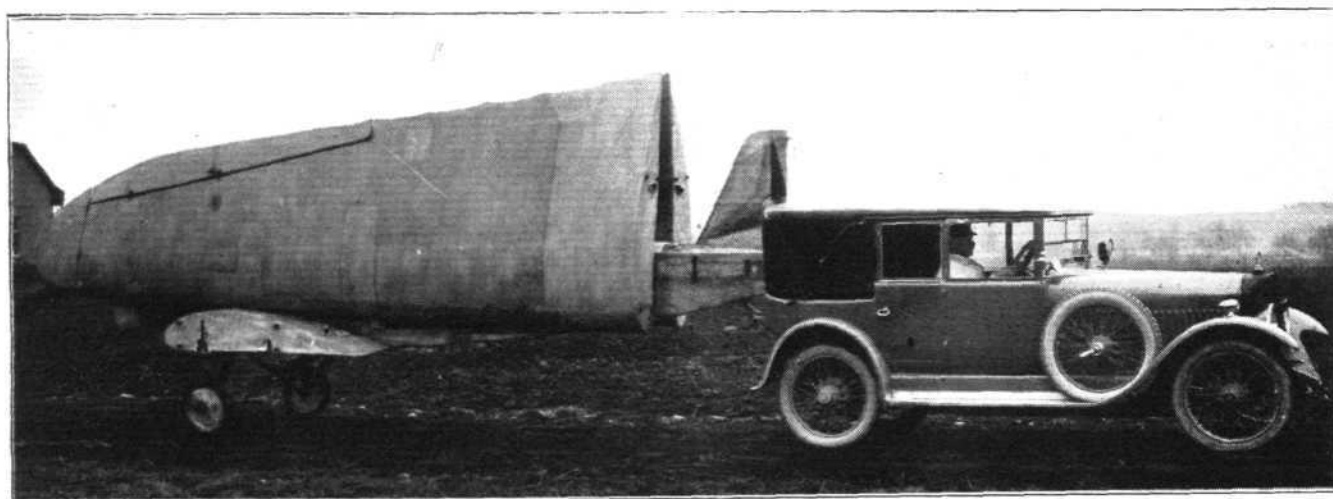
The Daimler L.20 on which the flight over the Alps was accomplished. The engine is a Mercedes-Daimler of 19 h.p. only.



who accomplished the flight were Herr Guritzer, chief pilot of the Daimler works at Sindelfingen, and Dr.-Ing. von Langsdorff, who was navigator, passenger, engineer, photographer—otherwise the unfortunate "victim"—throughout the trip. The machine used was the little low-wing monoplane L.20, of which two took part in the Rundflug last year, and which is equipped with a Mercedes engine of 19 (*nineteen*) h.p. only. In view of the fact that mountains of more than 12,000 ft. in height were flown over with this low engine power (the Daimler engine, which is a two-cylinder air-cooled, has a bore of 75 mm. and a stroke of 100 mm., giving a capacity of 885 c.c.), the flight being made during February and March, 1926, it can surely be claimed that the light 'plane

It had originally been intended to make the flight in the opposite direction to that actually taken, *i.e.*, starting from the Sindelfingen works of the Daimler Company to fly to Vienna and Budapest, returning to the starting point via the Alps. Dense ground fog, however, made a flight in an easterly direction almost impossible, and so it was decided to "do" the Alps on the outward journey, if possible, and the return flight via Vienna and Budapest.

After leaving Münsingen, the two aviators had to fly at an altitude of about 9,200 ft. to Augsburg, on account of ground fog. Their carefully-prepared maps were lost overboard, and for the rest of the trip they relied mainly upon cyclists' maps. In spite of this, however, Dr. von Langsdorff says



TRANSPORT BY ROAD : This photograph shows how the Daimler L.20 is towed by a motor car, the wings being dismantled and hung on the sides of the fuselage.

(using the term in the sense in which it was originally intended to be used) has proved itself a serious proposition.

Dr. von Langsdorff has been kind enough to send for publication in *FLIGHT* some of the photographs taken by him during the flight, and these, reproduced herewith, give a very good idea of the extremely difficult nature of the country over which a large proportion of the trip was made.

To get a proper perspective of the flight it should be pointed out that of ground organisation there was practically none. That is to say, no arrangements had been made for petrol

there was relatively little difficulty as regards navigation, although visibility was very poor almost throughout.

The flight from Augsburg to Schleissheim (north of Munich) was carried out in pouring rain, and from Munich to Salzburg heavy showers were encountered. Several attempts were made to penetrate eastwards towards Vienna, but thick fog each time compelled a return. It was then that the decision was made to head south towards the Alps. At Bad Reichenhall a landing was made in the fog. Later, although many of the valleys were shrouded in fog, a course was set for the

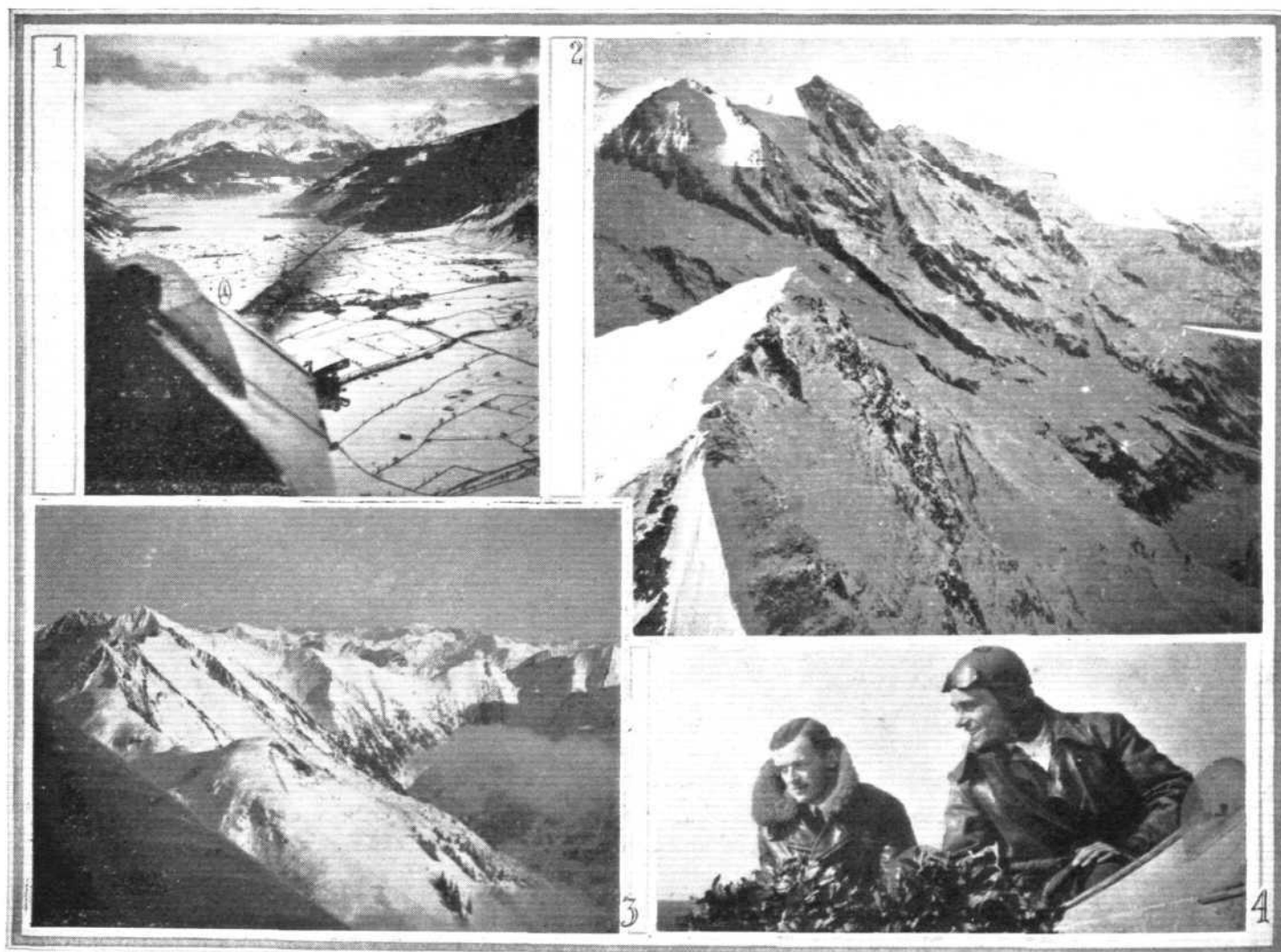


OVER THE ALPS IN A 19 H.P. TWO-SEATER : Sketch map of the route followed.

Zeller See, and on the way, against a strong head wind, the machine flew over Hohen Göll, Kallersberg, Hagengebirge, Steinernes Meer, Übergossene Alpe and Hochkönig (the latter 9,630 ft. high). Arrived at Zeller See, a landing was made in a meadow at Thumersbach, as it was not known whether or not the ice on the lake was strong enough to carry the machine. Here it may be mentioned that the divided undercarriage of the L.20 proved its worth, as the landing was

made in snow a foot deep, and it was considered that a machine with axle running across would have nosed over.

Impossible weather compelled a wait of several days at Zeller See, and in the meantime thaw set in, and the ice on the lake became too thin to carry the machine. Ultimately a start was made from a small meadow, across which a strip had been cleared. To get sufficient run it was necessary to take off across wind, but finally this was successfully



OVER THE ALPS IN A 19 H.P. TWO-SEATER : These photographs give an excellent idea of the difficult country over which the little Daimler L.20 had to fly. In 1, the machine is seen approaching the Zeller See. 2 shows, on the left the Hohe Docke and, in the back-ground, the Glocknerin. The tip of the tail plane may just be seen on the right of the picture. The Hohe Tauern mountain chain is seen in 3, while 4 shows the two aviators, Dr. von Langsdorff (left) and Herr Guritzer the pilot, on their return to Sindelfingen.



ON THE ZELLER SEE : After a successful landing on the ice.

accomplished. Dr. von Langsdorff is of the opinion that no large aeroplane could have got off, with the possible exception of a high-powered single-seater fighter, and such a machine would never have been able to land in this meadow. Heading for the Hohe Tauern mountain range an altitude of 9,200 ft. was reached, and the Glocknerin (11,250 ft.) and Hohe Docke were flown over. A strong headwind was encountered, and "bumps" were plentiful. However, the Gross-Glockner Massiv (12,450 ft.) was reached and the ridge of the Hohe Tauern crossed safely. Much of the way it was necessary to fly above the fog and cloud layers. Flying along the Hohe Tauern range, a forced landing was effected at Hermagor to repair a high-tension lead to one of the sparking plugs, and the journey was then resumed, Villach being reached at dusk and a landing made in a field.

The next "lap" was to Klagenfurt, along the Wörther See. At Klagenfurt a proper aerodrome and shed accommodation were available. From Klagenfurt to Gratz was a

most unpleasant trip, as the clouds hung low and it was necessary to fly over them and, at times, between cloud layers. Finally the visibility became so bad that it was necessary to descend at Voitsberg (situated in a valley in Styria), flying from there to the Talerhof aerodrome, near Gratz, a few feet above the ground.

The flight from Gratz to Vienna and thence to Budapest and back to Vienna was made in very bad visibility, with occasional rainstorms and, mainly, against strong winds. The return trip from Vienna to Linz, via Melk, was carried out in snowstorms. After leaving Linz the weather gradually got worse, and it became necessary to fly lower and lower in order not to lose sight of the ground altogether. Finally a landing had to be made on a field covered in snow near Frankenmarkt (on the river Traun). Later the weather gradually got better, so that the flight to Munich, via Salzburg, was made under fairly pleasant conditions. At Munich, however, the weather again became bad so that there was

considerable delay before the last part of the return journey, to Sindelfingen, could be commenced. At last it was accomplished in rain and head winds, and Sindelfingen was reached on March 16, 1926, the little machine having by this time covered a distance estimated at approximately 1,500 miles, in the middle of winter.



Not very inviting in case of forced landings. Looking out over the port wing at the Hohe Tauern mountains.

GENERAL MITCHELL'S APOLOGIA *

By MAJOR F. A. de V. ROBERTSON, V.D.

A CYNIC has said that the Athenians were perfectly justified in putting Socrates to death. He was an upright man, a good citizen, an old soldier, and what he said was always right. But when a fellow talked as Socrates did, really there was nothing for it but hemlock.

Of all the modern nations, the Americans do not perhaps afford the closest likeness to the Athenians, and certainly General Mitchell is not exactly a second Socrates. But after reading his book one is left with the feeling that there is a fairly close analogy between the two cases, and is inclined to congratulate General Mitchell that the Constitution of the United States does not recognise the judicial use of hemlock.

To the man in the skyscraper-shaded street it is possible that this book will appeal as a great and wonderful evangel. All the statements made in it will doubtless be swallowed whole—was not the author once in authority?—and the readers will marvel once more at the wicked obtuseness of the Prophet's kinsmen and countrymen. But to people on the Eastern side of the Atlantic who have tried to follow the developments of flying since the war, this book will be nothing but an irritant. There can be nothing so irritating as to see a cause in which one believes overstated, badly stated, supported by wild, exaggerated, and unproved statements, and propped by faulty arguments through which one's opponent's attorney will be able to drive a coach and four. In fact, the best service which one can do to one's cause is to anticipate that attorney's action.

General Mitchell's object is to secure the institution of a separate air service, and also of a ministry of defence (I beg pardon, defense) which would be over all three fighting services. An army, he thinks, has some part to play in future wars, if only as armed police; but a navy, if it is to be of any use, must be composed entirely of submarines. That, of course, is a perfectly intelligible programme and a good subject for argument. It is not in the least assisted by repeated, very much repeated, asseverations that the battleship's day is over because aircraft "can sink or destroy any vessels that ever have been built or that can ever be constructed." If you are going to be an officially unhonoured prophet, there is nothing like going in for whole-hearted comprehensive prophecies.

A reviewer in a British paper must certainly acknowledge Gen. Mitchell's compliments to this country as leading the way in setting up a separate air service. But one is surprised to see that an officer of Gen. Mitchell's position should not be able to obtain more accurate information about his opposite numbers in Great Britain than the following:—

"Now it is reported that the organisation of Great Britain's whole military force has gone so far as to make an air officer responsible for the whole defence of the British Isles. In case of a war in the future, this air officer will have under his orders not only the air force, but also the army and the navy for the protection of the islands."

The one occasion when Gen. Mitchell deals more or less with fact in the book is the chapter which describes the sinking of the old German men-of-war, the *Ostfriesland*, the *Frankfurt*, etc., by the aircraft under General Mitchell's command. At least, if the naval aircraft were under somebody else's command, the fact is not mentioned. The American pilots had evidently been well trained in bombing, for when attacking a destroyer "it had been decided beforehand that a certain

number of bombs should be fired at the decks, a few exploded in the water alongside, and some hits made down the funnels." This programme was carried out, but only one bomb was put down a funnel. The account on the whole makes interesting reading, and occupies about 35 pages. It does not, however, go into technical detail about the effect of the bombing on the ships. No attempt is made to meet the detailed criticisms of naval experts both in the States and in Great Britain. Gen. Mitchell, characteristically, is content to say that the test "conclusively proved the ability of aircraft to destroy ships of all classes on the surface of the water." Gen. Mitchell continues to repeat that for the rest of the book. "What I tell you three times is true," said the Bellman in the "Hunting of the Snark." Gen. Mitchell is not satisfied with a mere thrice. But surely he missed his great opportunity. If this book was to have any *raison d'être* at all, it certainly ought to have dealt in detail with the naval conclusions on the bombing of the *Ostfriesland*. The naval critic can only suppose that Gen. Mitchell has no remarks to make.

Curiously enough, General Mitchell thinks that aircraft can do comparatively little harm to submarines. British experience in this matter was more extensive than that of any other nation, and I have always understood that exactly the reverse opinion obtained. We never lost a ship when under escort of airship or aeroplane, and surely that fact speaks for itself. General Mitchell quotes some statistics of the slayers of submarines. But what does it matter that a destroyer actually worked the depth charge, if the submarine had been spotted, and the destroyer summoned, by the aircraft? "The best defense against submarines," writes Gen. Mitchell, and writes it several times, "is other submarines." Does he picture them fighting duels and fleet actions under water?

The book is loosely edited. A passage on p. 100 is practically identical with one on p. 124. That is the way of the ex cathedra speaker, and it is the part of a good editor to amend it. Both passages are notable for the sentence: "During the war no battleship sank another battleship." If by "battleship" is meant "capital ship," as should be the case if the argument is to be of any value, the statement is extravagantly incorrect.

One or two more examples of Gen. Mitchell's statements may be quoted. On p. 4 he tells us that aircraft carry "guns and cannon." On p. 12: "The sun's rays are what make most of the trouble for the aviator." Just let Gen. Mitchell try an English November! On p. 16: "The Great War . . . was not as severe a contest for the fighters as our own Civil War in America was sixty years ago." On p. 86: "Safety of operation along properly administered and installed airways is as great, if not greater, than for means of transportation on the ground." What about it, F. L. B.? On p. 139: "I can say now, definitely, that we can encircle the globe in a very short time on a single charge of gasoline." The General is cautious at times. This is a much more guarded prophecy than that about sinking battleships. On p. 156: "We believe that, from both a military and a commercial standpoint, the helicopter will be of great value."

As for the language in which Gen. Mitchell writes, the spelling of the title speaks for itself. On p. 60, "one (aeroplane) after another in regular cadence dove for the destroyer." And on p. 201 we read about the "Fifth British Army under General Goff." If this author must be "fonetik," why does he not delete the last letter of his own name? What the L is the good of it?

R.A.F. Cairo-Cape-Cairo Flight

THE flight of four R.A.F. Fairey III D biplanes (Napier "Lions"), under Wing Commander C. W. H. Pulford, resumed the homeward journey on May 3, when they left Pretoria—where a long stop had been made—for Bulawayo. By May 6, they had reached N'Dola, having made a stop at Livingstone en route.

Spanish Flight to Manila

CAPT. GALLARZA, one of the three Spanish pilots who left Madrid on April 5, in three Breguet XIX biplanes, for Manila, arrived at Aparri, North Philippines, early this week. There is still no news of his companion, Capt. Loriga, who failed to reach Macao, and it is feared that he is lost,

as a cargo vessel sailing from Kwangchow to Macao, reported having seen an aeroplane fall into the sea about 100 miles from Kwangchow, and it is assumed that it was Capt. Loriga's machine.

German Aircraft Restrictions

THE negotiations between the Conference of Ambassadors and the German Government in connection with the Allied restrictions on German aircraft have at last resulted in an agreement. This, we understand, brings to an end the operation of the "Nine Rules" and the presence in Germany of an Allied Air Committee of Guarantee. We hope to publish further particulars regarding this important matter in a future issue of FLIGHT.

* "Winged Defense, the Development and Possibilities of Modern Air Power—Economic and Military." By William Mitchell, former Assistant Chief of the Air Force, U.S.A. (G. P. Putnam's Sons.)

THE ROYAL AIR FORCE

London Gazette, May 4, 1926,

General Duties Branch

Air Vice-Marshal J. M. Steel, C.B., C.M.G., C.B.E., relinquishes his appt. as an addl. member of the Air Council on appt. as Air Officer Commanding, Wessex Bombing Area, R.A.F. (April 12). Air Commodore T. C. R. Higgins, C.M.G., relinquishes his appt. as Director of Training, Air Ministry (April 24). Group Capt. N. D. K. MacEwen, C.M.G., D.S.O., is apptd. Deputy Director of Training, Air Ministry (May 1) (vice Group Capt. L. W. B. Rees, V.C., O.B.E., M.C., A.F.C.). The following Pilot Offrs. are promoted to rank of Flying Offr.:—H. Miller (Feb. 8); D. J. Lloyd (Feb. 8) (since deceased); A. T. S. Studdert (Feb. 15); W. E. Symonds (March 8); W. E. Gray (March 8); C. R. Cubitt (March 30); C. W. Switzer (April 15); J. A. C. Florence (April 15). Wing Commr. J. C. Quinell, D.F.C., is placed on half-pay, Scale A, with effect from April 23, and is transferred to Scale B, with effect from June 1; Flying Offr. H. L. Beatty is restored to full-pay from half-pay (April 16); Flight Lt. F. L. C. Butcher is placed on retd. list at his own request and is granted permission to retain rank of Squadron Ldr. (April 15); Flying Offr. G. W. Dean is transferred to Reserve, Class A (May 1); Pilot Offr. C. J. Pavia resigns his short service commn. (May 5); the short service commn. of Pilot Offr. on probation S. B. Flood is terminated on cessation of duty (May 5); Flying Offr. C. D. Woodyatt (Lt., Northants R.) relinquishes his temp. commn. on retirement from the Army (April 28); Flying Offr. C. A. Ravn (Lt. R. Welsh Fus.) is removed from the service (April 20).

Stores Branch

Flying Offr. A. G. S. Tuke is granted a permanent commn. in this rank,

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Air Commodore T. C. R. Higgins, C.M.G., to H.Q., Iraq, for duty as Chief Staff Officer; 26.4.26.

Group Captains: L.W.B. Rees, V.C., O.B.E., M.C., A.F.C., A.D.C. to R.A.F. Depot, Uxbridge, Supernumerary, pending posting overseas; 1.5.26. N. D. K. MacEwen, C.M.G., D.S.O., to Air Ministry on appointment as Deputy Director of Training; 1.5.26. W. F. MacNeece, C.B.E., D.S.O., D.F.C., to Air Ministry, Directorate of Operations and Intelligence, for Air Staff duties; 7.4.26.

Wing Commanders: W. G. P. Young, O.B.E., to R.A.F. Depot, Uxbridge, for administrative duties; 3.5.26. A. C. Maund, C.B.E., D.S.O., to H.Q., Inland Area, Uxbridge, supernumerary, pending posting to H.Q., Air Defences of Great Britain; 26.4.26.

Squadron Leaders: E. D. Atkinson, D.F.C., A.F.C., to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 2.4.26. E. R. Manning, D.S.O., M.C., to Air Ministry; 24.4.26. G. C. Bailey, D.S.O., to Aeronautical Committee of Guarantee, Germany; 28.4.26. R. S. Booth, A.F.C., to Royal Airship Works, Cardington; 26.4.26.

Flight Lieutenants: G. F. Moody to Sch. of Tech. Training (Men), Mansington; 13.4.26. R. F. Durrant, A.F.C., to Elec. and Wireless Sch., Flowerdown; 26.4.26. T. F. W. Thompson, D.F.C., to Air Ministry; 26.4.26. J. Castle, M.B.E., D.F.C., to No. 4 Armoured Car Coy., Iraq; 8.4.26. K. E. Ward, to No. 1 Sqdn., Iraq, instead of to H.Q., Iraq, as previously notified; 5.3.26. G. M. Moore, M.C., to R.A.F. Depot, Uxbridge, on transfer to Home

with effect from Sept. 7, 1925, on completion of probationary service; Pilot Offr. on probation G. H. Doveton is confirmed in rank (Feb. 10); Flight Lt. F. Paterson is placed on retired list (May 4).

Medical Branch

The following are granted short service commns. as Flying Offrs., for three years on the Active List, with effect from and with seny. of April 14:—R. J. I. Bell, R. G. Freeman. Flight Lt. M. Coghlan, M.B., relinquishes his tempy. commn. on ceasing to be employed (May 1).

Memoranda

Flying Offr. S. G. Wybrow is granted permission to retain rank of Flight Lt.; Sec. Lt. F. H. Towler resigns his hon. commn. (April 17).

Reserve of Air Force Officers

M. J. Berlyn is granted a commn. in Class AA, General Duties Branch, as a Pilot Offr. on probation (April 19); Pilot Offr. L. S. Webb is confirmed in rank (April 13).

The following relinquish their commns. on completion of service (May 1):—Flight Lt. L. Reynolds, Flying Offr. E. C. Dickens. The commns. of the follg. Pilot Offrs. on probation are terminated on cessation of duty:—H. R. Hayden (April 13); L. E. B. Alexander (April 15).

Princess Mary's R.A.F. Nursing Service

Miss M. E. Cunningham resigns her appointment as Sister (April 14).

ERRATUM.—Gazette of April 20 (FLIGHT, April 29, 1926, p. 265):—The date of effect of the appointment of Flight Lt. J. C. H. Allan, M.B., is April 20.

Estab.; 19.4.26. J. McG. Fairweather, D.F.C., to No. 30 Sqdn., Iraq; 11.4.26. J. F. T. Barrett, D.F.C., to H.Q., Iraq; 24.4.26. E. Thornton, to No. 28 Sqdn., India; 2.4.26. E. I. Bussell, to Central Flying Sch., Upavon; 21.4.26. H. A. Hamersley, M.C., to No. 12 Sqdn., Andover; 19.4.26.

Stores Branch

Squadron Leader F. A. Baldwin to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 9.4.26.

Flight Lieutenants: T. A. G. Hawley, to R.A.F. Depot, Uxbridge; 12.4.26; L. Smith to Aircraft Depot, India; 13.4.26.

Flying Officers: R. H. Latham to Aircraft Depot, India; 13.4.26. H. A. Williams to Sch. of Photography, S. Farnborough; 1.4.26. J. C. Daniels, to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 2.4.26.

Accountant Branch

Flying Officers: F. L. Wood, to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 2.4.26. J. L. Armstrong, to Heliopolis Details, Egypt; 9.4.26.

Medical Branch

Squadron Leaders: W. A. S. Duck, O.B.E., to H.Q., Palestine Command; 1.4.26. R. A. G. Elliott, M.B., D.P.H., B.A., to Palestine General Hospital; 1.4.26.

Flight Lieutenant R. W. White to R.A.F. Depot, on transfer to Home Estab. 20.3.26.

Flying Officer (Q. Mstr. Medical) B. Willshire, to R. A. F. Depot, on transfer to Home Estab.; 20.3.26.

MR. COBHAM AT INSTITUTION OF AERONAUTICAL ENGINEERS

On April 30 Mr. Alan Cobham and Mr. Elliott were entertained to dinner by the Institution of Aeronautical Engineers at Hatchett's Restaurant, Piccadilly, Sir Charles Bright, F.R.S.E., M.Inst.C.E., Vice-president of the Institution of Aeronautical Engineers, being in the chair. The dinner was made the occasion for presenting to Mr. Cobham the Simms Gold Medal (given by Mr. Frederick R. Simms) and to Mr. Elliott the Council's Silver Medal in recognition of their London-Cape Town-London flight.

Sir Charles Bright said he was acting as a substitute for Col. Moore Brabazon, President of the Institution, who was prevented by political duties from being present. He referred to the aeronautical career of Mr. Cobham, and said that in the London-Cape Town and back flight Mr. Cobham had eclipsed all his previous achievements. Engineering, Sir Charles said, had played a great part in the success of the flight, and he paid a tribute to the de Havilland Aircraft Company.

Mr. Cobham, in thanking the Institution for the great honour conferred upon him, said that cross-country flying was a matter of keeping on with the job and gaining fresh experience. He then gave an entertaining account of his experiences since he left the R.A.F. in January, 1919, and finished by saying that he had long since come to the conclusion that the development of civil aviation in the Colonies should receive the greatest attention, as it offered a far greater chance of success than had ever been the case with European air lines.

Mr. Elliott thanked the Institution for the honour conferred upon him, and said that during the recent trip his job had been to keep the propeller turning. As for the machine, he knew it inside out. They had certainly found that the combination of a D.H. 50 aeroplane and an air-cooled engine was ideal.

Mr. Bramson said there were those in Mr. Cobham's and

his (Mr. Bramson's) profession who did not hold Mr. Cobham's views, and who would say, "Oh, So-and-so could have done it, given the opportunity." Mr. Cobham had made his own opportunities, and it needed a tremendous amount of energy. He was somewhat disappointed that Mr. Cobham had not touched upon the subject of multiple-engined machines, since this type must surely have had his (Mr. Cobham's) consideration.

Replying to Mr. Bramson, Mr. Cobham said that if money had been plentiful they could have taken a four- or five-engined machine, but they had to put up as big a show as possible on a minimum of L.s.d. and had selected the best existing type available.

Capt. Tymms said that Mr. Cobham was a very modest person and always gave much of the credit to others. In flights such as these there were many obstacles to be overcome, and Capt. Tymms referred to the fact that we had now nearly, although not quite, reached the stage when one could fly to any country without first getting permission. In countries where restrictions still existed it was necessary to get permission three months beforehand. He thought this fact had not been mentioned in public before.

Mr. Hulbert proposed a vote of thanks to Sir Charles Bright for taking the chair, and to Mr. Howard-Flanders for his work in arranging such an enjoyable evening, both votes being passed with acclamation. The gathering then came to a close.

Among those present, in addition to the speakers, were the following: Mrs. Alan Cobham, Mrs. Bramson, Mrs. Howard-Flanders, Mrs. Ringwood, Mrs. Sanger, Mrs. Tymms, Miss Buckman, Miss Wingfield, Mr. E. N. B. Bentley, Mr. F. Bevilacqua, Mr. S. L. Elliott, Mr. W. Villa Gilbert, Mr. F. Hearle, Mr. F. W. Hopkins, Mr. Howard-Flanders, Mr. D. W. B. Hughes, Mr. T. W. Langley, Mr. T. B. Ringwood, and Capt. W. H. Sayers.



THE "NAPIER" DINNER TO COMANDANTE FRANCO: The above photograph was taken on the occasion of a Dinner given by the Napier Company to Comandante Franco and his comrades, at Madrid recently. Included in the group are Gen. Soriano (late Chief of Spanish Air Force), Lieut.-Col. Kindelau (head of Spanish Air Force), Com. Franco, Capt. Ruiz de Alda, Lieut. Duran, and Pablo Rada—the four Transatlantic heroes—and also Mr. Jones and Mr. Winter, who represented Napiers.

PERSONALS

Married

Flight Lieut. DENYS GILLEY, D.F.C., R.A.F., second son of Mr. and Mrs. J. B. Gilley, of Torquay, was married on April 27 at All Souls, Langham Place, to KATHLEEN BEYNOM STOCKEN, only daughter of Mr. and Mrs. CHARLES B. STOCKEN, of 75, North Gate, Regent's Park, N.W.

On April 26, at Holy Trinity Church, Brompton, CHARLES JAMES SIDNEY O'MALLEY, R.A.F., Medical Service, was married to MARJORIE ALTHEA, only daughter of Mr. and Mrs. W. J. FAULKS, of Newmount, Windsor Terrace, Hampstead.

To be Married

An engagement is announced between Mr. C. H. W. BOLDERO, R.A.F., younger son of the Rev. J. H. and Mrs. Boldero, of Morton Vicarage, Bourne, Lincolnshire, and Miss BRENDA CARTER READ, only daughter of Mr. ALFRED CARTER READ and the late Mrs. CARTER READ, formerly of Japan.

The Laurence Minôt Memorial Trophy

THE Air Ministry announces:—A new trophy, to be known as the Laurence Minôt Memorial Trophy, has been presented by a donor who wishes to remain anonymous, in memory of the late Captain Laurence Minôt, M.C., Royal Flying Corps, who was killed on July 28, 1917, in air combat, whilst serving with No. 57 Squadron, Royal Flying Corps. Competition for this trophy, which will be awarded annually to the crew of the bombing aeroplane which obtains the highest degree of accuracy in individual classification bombing practices for the current year, will be open to all bombing squadrons under the command of the Air Officer Commanding in Chief, Air Defence of Great Britain. The word "crew" covers the pilot of the aeroplane and the bomb aimer, whether officer or air gunner. The trophy will be held for one year by the unit in which the winning crew was serving at the time that the trophy was won. The first award will be made on the results of classification practices in 1927.

The Royal Air Force Memorial Fund

THE fortnightly meeting of the Grants Sub-Committee of the above fund was held at Iddesleigh House, April 29.

Lieut.-Commander H. E. Ferrin was in the chair, and the other members of the committee present were Mrs. L. M. K. Pratt-Barlow, O.B.E., Squadron-Leader E. B. Peauman.

The committee considered in all 15 cases, and made grants to the amount of £344 1s. 6d.

The next meeting was fixed for today, at 2.30 p.m.

War on Riffs Resumed

WITH the breakdown of peace negotiations, the French air service resumed operations against the Riffs on May 7 with a heavy bombing attack from the air on enemy positions.

Aircraft in the Great Strike

As might be expected, aircraft played a very important part in assisting the country to "carry on" during the General Strike. Not only was the traffic on Imperial Airways and other air services, to and from Croydon exceptionally heavy, but numerous machines were actively engaged in transporting passengers, goods, and newspapers throughout various parts of the United Kingdom and the Continent.

AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

APPLIED FOR IN 1924

Published May 13, 1926

- 30,317. W. C. and C. R. SCOTTER. Apparatus for lifting aerial machines and maintaining them in the air, etc. (250,637.)

APPLIED FOR IN 1925

Published May 13, 1926

- 1,442. A. HONEY. Propellers, airscrews, etc. (250,679.)
1,597. ENGLISH ELECTRIC CO., LTD., and F. MORRIS. Mechanism for transmitting rotary motion. (250,684.)
1,657. A. H. R. FEDDEN, L. F. BUTLER and BRISTOL AEROPLANE CO., LTD. Valve-gear for i.c. engines.
2,405. AIRSHIP GUARANTEE CO., LTD., and P. L. TEED. Manufacture of hydrogen, etc. (250,700.)
2,896. DOUGLAS MOTORS, LTD., and C. G. PULLIN. Tube joints. (250,702.)
7,177. BABCOCK AND WILLCOX, LTD., and F. W. HOLLOCK. Airship mooring-mast. (250,734.)
28,638. LORD INVERNAIN (W. BEARDMORE) and A. E. L. CHORLTON. Transmission mechanism. (243,707.)

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